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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,670	03/17/2000	Ghun-up Cha	0630-0983P	2822

7590   09/05/2003

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EXAMINER
BOWES, SARA E

ART UNIT	PAPER NUMBER
2171	

DATE MAILED: 09/05/2003   5

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
- earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _17 March 2000_ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-12_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-12_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _17 March 2000_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35

U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No.

9014/1999, filed on March 17, 1999.

Drawings

The drawings are objected to because Figure 1 is not label as Prior Act and a

subsystem is mislabeled in Figure 5.

Figure 1 should be designated by a legend such as --Prior Art-- because only

that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

because they do not include the following reference sign(s) mentioned in the

description: 100B. In the specification, digital data servers 110A-110C are mentioned in

line 16 of page 9, however digital data server 110B is not included in Figure 5.

A proposed drawing correction or corrected drawings are required in reply to the

Office action to avoid abandonment of the application. The objection to the drawings

will not be held in abeyance.

Claim Rejections - 35 USC § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claims 1 –12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "high" and "low" in claims 1, 6, 10, and 12 are relative terms which render the claim indefinite. The terms "high" and "low" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The terms "high" and "low" in reference to high encryption level and low encryption level are not clearly defined in the claims or the specification.

The term "weakly" in claims 5 and 8 is a relative term which renders the claim indefinite. The term "weakly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The terms "weakly" in reference to weakly encrypting is not clearly defined in the claims or the specification.

Referring to claims 2-5, 7-9, and 11, these claims are also rejected because they are dependent on claims 1, 6, 10, and 12 and therefore inherit its deficiencies.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

Claims 1-3, 6, and 9 -12 are rejected under 35 U.S.C. 102(e) (as best as the

Examiner is able to ascertain) as being anticipated by Saito, U.S. Patent 5,867,579.

Referring to claim 1, Saito discloses a method for encrypting digital data,

comprising:

- decrypting digital data which had been encrypted at a high encryption level [see

  Figure 5, ENCRYPTION 44, TRANSMISSION 45, DECRYPTION 46];

- storing a predetermined amount of the decrypted digital data in a buffer [see

  column 19, lines 19-22];

- reencrypting digital data output from the buffer at a low encryption level [see

  column 19, lines 19-22]; and

- transferring the reencrypted digital data to a digital data player or a data storage

  medium [see Figure 5, DISPLAY 49, STORAGE 51].

Referring to claim 2, Saito discloses the method as set forth in claim 1, wherein

the storing step includes variably setting an effective capacity of the buffer [RAM,

column 11, line 56] according to a size of the digital data.

However, Saito does not explicitly recite the ability to variably set an effective

capacity of the buffer. Nonetheless, it is inherit in write/read memory, like that taught by

Saito, that an input pointer write the new data into an allocated space in memory thus

variably setting an effective capacity.

Referring to claim 3, Saito teaches the method as set forth in claim 2, wherein the effective capacity of the buffer is smaller than the size of the digital data [see column 19, lines 40-42].

Referring to claim 6, Saito teaches a method for encrypting digitial data, comprising:

- determining whether digital data which has been encrypted at a high encryption level must be protected from unauthorized copying [see column 16, line 44-46];

- decrypting the digital data [see Figure 8 (b), and column 18, lines 51-67]; and

- reencrypting the decrypted digital data at a low encryption level if the decrypted digital data must be protected from unauthorized copying [see column 18, lines 51-67].

Referring to claim 9, Saito teaches the method set forth in claim 6, further comprising:

- storing a predetermined amount of the decrypted digital data in a buffer prior to the reencrypting step if the decrypted digital data must be protected from unauthorized copying [column 19, lines 19-22].

Referring to claim 10, Saito teaches a method for encrypting digitial data, comprising:

- determining whether digital data which has been encrypted at a high encryption level must be protected from unauthorized copying (see column 16, line 44-46);

- decrypting the digital data (see Figure 8 (b), and column 18, lines 51-67); and

- transferring the decrypted digital data to a digital data player or data storage

  medium if the decrypted digital data need not be protected from unauthorized

  copying [see Figure 5, column 12, line 65 – column 11, line 3].

  Referring to claim 11, Saito teaches a method as set forth in claim 10 further

comprising:

- reencrypting the decrypted digital data at a low encryption level if the decrypted

  digital data must be protected from unauthorized copying (see column 18, lines

  51-67).

  Referring to claim 12, Saito teaches all limitations of claim 12.

  A program (or script) embodied on a computer-readable medium [column 11,

lines44-46] for encrypting or decrypting a digital data file, the computer-readable-

medium-embodied program comprising:

- a first program code segment to receive and store digital data encrypted to a high

  level [see Figure 3 and column 11, lines 47-49] and an encryption key [see

  Figure 4 and column 12, lines 1-3];

- a second program code segment to decrypt the stored digital data using the

  encryption key [see Figure 4 and column 12, lines 1-3];

- a third program code segment to store a predetermined amount of the decrypted

  digital data in a buffer [see Figure 4]; and

- a fourth program code segment to reencrypt the digital data from the buffer to a

  low level and download the reencrypted digital data[see Figure 3 and column 11,

  lines 47-49] to a digital data player or a data storage medium [see Figure 5].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Saito, U.S. Patent 5,867.

Referring to claim 2, Saito teaches the method as set forth in claim 1, wherein

the storing step includes variably setting an effective capacity of the buffer [RAM,

column 11, line 56 according to a size of the digital data, as set forth above. (However,

to expedite prosecution, the Examiner herein addresses the possibility that the claimed

buffer is not inherent in Saito.) So, for argument's sake, Saito is silent as to the

provision of variably setting the effective buffer capacity. Nonetheless, the Examiner

takes official notice that write/read memories -- like that of Saito -- are termed "buffers"

and serve to balance traffic demands on digital data being sent from one subsystem

(i.e., MPU 46 of Figure 3 of Saito) to another subsystem (i.e., CPU 16 of Figure 3 of

Saito), which may be running on differing synchronization clock signals. Hence, it would

have been obvious to one of ordinary skill in the art, to vary the write/read memory clock

so as to compensate for traffic demands -- resulting in a variable effective capacity

buffer.

Hence, given the inherent characteristics of buffers, it would be obvious to one of

ordinary skill, at the time the invention was made, to variably set an effective capacity of

the buffer. The motivation for variably setting an effective capacity of the buffer would

be to increase the processing speed of the CPU.

Referring to claim 3, Saito teaches the method as set forth in claim 2, wherein

the effective capacity of the buffer is smaller than the size of the digital data [see column

19, lines 40-42].

Claims 4-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Saito, U.S. Patent 5,867 in view of Ishibashi, U. S. Patent No. 6,021,199.

Saito discloses all the limitations of claims 4 and 5 except:

- the reencrypting step includes encrypting certain portions of the decrypted digital

  data, thereby leaving decrypted remaining portions of the decrypted digital data

  in the reencrypted digital data.

- the reencrypting step includes weakly encrypting all of the decrypted digital data.

Ishibashi teaches an encryption method that includes encrypting certain portions of the decrypted digital data, thereby leaving decrypted remaining portions of the decrypted digital data in the reencrypted digital data (see Figure 2 and column 4, lines 10-12, 15). Ishibashi does not explicitly teach weakly encrypting all of the decrypted digital data; however, weakly encrypting all of the decrypted digital data and encrypting certain portions of the decrypted digital data will yield the same end result.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Ishibashi's teachings to the method of Saito. One would have been motivated to modify the teachings of Saito to include encrypting the decrypted digital data at a "low encryption level" to reduce the power needed from the CPU to decrypt the digital data.

Saito teaches all limitations of claims 7 and 8 except:

- the reencrypting step includes encrypting certain portions of the decrypted digital data, thereby leaving decrypted remaining portions of the decrypted digital data in the reencrypted digital data.

- the reencrypting step includes weakly encrypting all of the decrypted digital data.

Ishibashi teaches an encryption method that includes encrypting certain portions of the decrypted digital data, thereby leaving decrypted remaining portions of the decrypted digital data in the reencrypted digital data (see Figure 2 and column 4, lines 10-12, 15). Ishibashi does not explicitly teach weakly encrypting all of the decrypted digital data; however, weakly encrypting all of the decrypted digital data and encrypting certain portions of the decrypted digital data will yield the same end result.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Ishibashi's teachings to the method of Saito. One would have been motivated to modify the teachings of Saito to include encrypting the decrypted digital data at a "low encryption level" to reduce the power needed from the CPU to decrypt the digital data.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,805,706 to Davis

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sara Bowes whose telephone number is 703-305-0326. The examiner can normally be reached on 7:30-4:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.
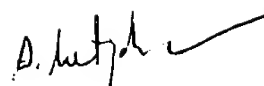
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